

(12) DEMANDE INTERNATIONALE PUBLIÉE EN VERTU DU TRAITÉ DE COOPÉRATION EN MATIÈRE DE BREVETS (PCT)

## (19) Organisation Mondiale de la Propriété Intellectuelle

Bureau international





(43) Date de la publication internationale 22 janvier 2004 (22.01.2004)

**PCT** 

## (10) Numéro de publication internationale WO 2004/007179 A 1

(51) Classification internationale des brevets<sup>7</sup>: **B29C** 53/80, F16L 9/12 // B29L 23:00

(21) Numéro de la demande internationale :

PCT/FR2003/001954

- (22) Date de dépôt international: 25 juin 2003 (25.06.2003)
- (25) Langue de dépôt :

français

(26) Langue de publication :

français

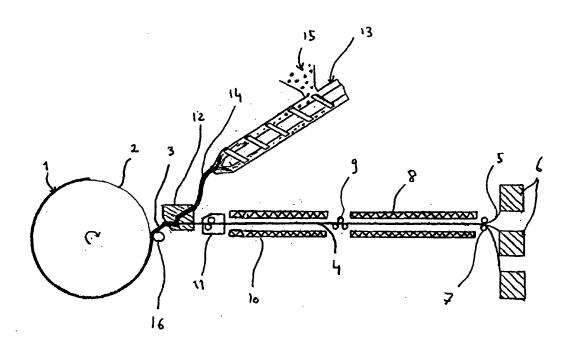
- (30) Données relatives à la priorité : 02/08419 4 juillet 2002 (04.07.2002) FF
- (71) Déposant (pour tous les États désignés sauf US): SAINT-GOBAIN VETROTEX FRANCE S.A. [FR/FR]; 130, avenue des Follaz, F-73000 Chambéry (FR).
- (72) Inventeurs; et
- (75) Inventeurs/Déposants (pour US seulement): ZANELLA,

Guy [FR/FR]; 30, rue Maurice Ravel, F-73160 Cognin (FR). DUCRET, Christophe [FR/FR]; 301, avenue du Covet, F-73000 Chambéry (FR). VOIRON, Jacques [FR/FR]; Côte Barrier, F-73160 St Jean de Couz (FR).

- (74) Mandataire: GOLDENBERG, Virginie; Saint-Gobain Recherche, 39, quai Lucien Lefranc, F-93300 Aubervilliers (FR).
- (81) États désignés (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW.
- (84) États désignés (régional): brevet ARIPO (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), brevet

[Suite sur la page suivante]

- (54) Title: METHOD AND DEVICE FOR PRODUCING A HOLLOW BODY BY ROTATION AND RESULTING PRODUCTS
- (54) Titre: PROCEDE ET DISPOSITIF DE FABRICATION D'UN CORPS DE REVOLUTION ET PRODUITS OBTENUS



(57) Abstract: The invention concerns a method comprising at least the following steps: introducing at least one first heated composite web into at least one die; introducing simultaneously into said die at least a melt in contact with said first composite web, so as to obtain at least a second composite web; winding said second composite web around a support rotating about its axis. The invention also concerns a device for implementing the method and the resulting products.



## INTERNATIONAL SEARCH REPORT



A. CLASSIFICATION OF SUBJECT MATTER IPC 7 B29C53/80 F16L9/12 //B29L23:00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  $IPC\ 7\ B29C$ 

Documentation searched other than minimum documentation to the extent that such documents are included. In the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## EPO-Internal

| Category ° | Citation of document, with indication, where appropriate, of the relevant passages                  | 1,7-9,<br>11,12 |  |
|------------|---|-----------------|--|
| х          | EP 0 816 050 A (TOSCA BRUNO ;SCOTTO CAMILLO (IT)) 7 January 1998 (1998-01-07) the whole document    |                 |  |
| Х          | US 3 226 273 A (BECKER RICHARD M)<br>28 December 1965 (1965-12-28)                                  | 12              |  |
| Α          | column 5, line 17-37; claim 1; figure 2   | 1-11,15         |  |
| Χ          | US 3 874 972 A (WESGH LUDWIG)   | 12              |  |
| A          | 1 April 1975 (1975-04-01)<br>claims 1,2; figures 6A,6B  | 1-11,15         |  |
| A          | DE 198 52 159 C (THUERINGISCHES INST<br>TEXTIL) 24 February 2000 (2000–02–24)<br>the whole document | 1-11,15         |  |
|            | -/  |                 |  |
|            |   |                 |  |

| Further documents are listed in the continuation of box C.  | Patent family members are listed in annex.  |
|---|---|
| Special categories of cited documents:  A* document defining the general state of the art which is not considered to be of particular relevance  E* earlier document but published on or after the International filling date  L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  O* document referring to an oral disclosure, use, exhibition or other means  P* document published prior to the international filing date but later than the priority date claimed | "T" later document published after the International filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.  "&" document member of the same patent family |
| Date of the actual completion of the international search   | Date of malling of the international search report  |
| 13 November 2003  | 09/12/2003  |
| Name and mailing address of the ISA  European Patent Office, P.B. 5818 Patentlaan 2  NL - 2280 HV Rijswijk  Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016   | Authorized officer Foulger, C   |





| Category ° | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
|------------|--|-----------------------|
| A          | WO 99 12716 A (APPLIED COMPOSITES<br>AKTIEBOLAG ;JOHANSSON NILS GOERAN (SE);<br>BOFORS) 18 March 1999 (1999-03-18)<br>page 3, paragraph 2; claims 1-3; figure 1  | 1-15                  |
| A          | FR 2 807 966 A (VETROTEX FRANCE SA) 26 October 2001 (2001-10-26) the whole document  | 1-11                  |
| A          | FR 2 784 930 A (VETROTEX FRANCE SA) 28 April 2000 (2000-04-28) the whole document  | 1-15                  |
| X          | HAUPERT F ET AL: "NEUES FERTIGUNGS-VERFAHREN FUER MOCHLEISTUNGS-VERBUNDWERKSTOFF- GLEITLAGER" KUNSTSTOFFBERATER, KUNSTSTOFF VERLAG. ISERNHAGEN, DE, vol. 41, no. 11, 1 November 1996 (1996-11-01), pages 37-39, XP000636220 ISSN: 0172-6374 the whole document | 13,14                 |
| <b>X</b>   | US 3 938 929 A (STENT VERNON DENNIS ET AL) 17 February 1976 (1976-02-17) column 5, line 59-61; figure 6  | 13                    |
|            |  |                       |
|            |  |                       |
|            |  |                       |
|            |  |                       |
|            |  |                       |
|            |  |                       |

Form PCT/ISA/210 (continuation of second sheet) (July 1992)



Interactional Application No

PCT/FR 03/01954

| Patent document ted in search report |     | Publication<br>date       |      | Patent family<br>member(s) | Publication date |
|--------------------------------------|-----|---------------------------|------|----------------------------|------------------|
| P 0816050                            |     | 07-01-1998                | IT   | MI961282 A1                | 29-12-1997       |
| .1 0010050                           | - 1 | 0, 01 1000                | ΑT   | 207803 T                   | 15-11-2001       |
|                                      |     |                           | DE   | 69707763 D1                | 06-12-2001       |
|                                      |     |                           | DE   | 69707763 T2                | 01-08-2002       |
|                                      |     |                           | EP   | 0816050 A1                 | 07-01-1998       |
|                                      |     |                           | ĒS   | 2167642 T3                 | 16-05-2002       |
| JS 3226273                           | Α   | 28-12-1965                | NONE |                            |                  |
| JS 3874972                           | Α   | 01-04-1975                | US   | 3461094 A                  | 12-08-1969       |
| DE 19852159                          | С   | 24-02-2000                | DE   | 19852159 C1                | 24-02-2000       |
| WO 9912716                           | A   | 18-03-1999                | SE   | 508393 C2                  | 05-10-1998       |
| no 3312/10                           | ••  | <del>-</del> <del>-</del> | SE   | 9703222 A                  | 05-10-1998       |
|                                      |     |                           | WO   | 9912716 A1                 | 18-03-1999       |
|                                      | Α   | 26-10-2001                | FR   | 2807966 A1                 | 26-10-2001       |
| 11. 2007.300                         | ••  |                           | AU   | 5640001 A                  | 07-11-2001       |
|                                      |     |                           | BR   | 0110241 A                  | 07-01-2003       |
|                                      |     |                           | CA   | 2407075 A1                 | 01-11-2001       |
|                                      |     |                           | CZ   | 20023505 A3                | 14-05-2003       |
| •                                    |     |                           | ĒΡ   | 1276603 A1                 | 22-01-2003       |
|                                      |     |                           | WO   | 0181073 A1                 | 01-11-200        |
|                                      |     |                           | SK   | 15002002 A3                | 03-06-2003       |
| FR 2784930                           | A   | 28-04-2000                | FR   | 2784930 A1                 | 28-04-2000       |
| 1 K E/O 1300                         | • • |                           | ΑT   | 230345 T                   | 15-01-200        |
|                                      |     |                           | AU   | 6208799 A                  | 15-05-200        |
|                                      |     | •                         | BR   | 9914693 A                  | 10-07-200        |
|                                      |     |                           | CA   | 2347147 A1                 | 04-05-200        |
|                                      |     |                           | CN   | 1118364 B                  | 20-08-200        |
| •                                    |     |                           | CZ   | 20011443 A3                | 12-09-200        |
| •                                    |     |                           | DE   | 69904742 D1                | 06-02-200        |
|                                      |     |                           | EP   | 1123194 A1                 | 16-08-200        |
|                                      |     |                           | ES   | 2189496 T3                 | 01-07-200        |
|                                      | *   |                           | WO   | 0024566 A1                 | 04-05-200        |
|                                      |     |                           | FR   | 2784931 A1                 | 28-04-200        |
|                                      |     |                           | HU   | 0104232 A2                 | 28-03-200        |
|                                      |     |                           | JP   | 2002528295 T               | 03-09-200        |
|                                      |     |                           | NO   | 20011971 A                 | 18-06-200        |
|                                      |     |                           | PL   | 347926 A1                  | 22-04-200        |
|                                      |     |                           | SK   | 5432001 A3                 | 08-10-200        |
|                                      |     |                           | TR   | 200101133 T2               | 21-11-200        |
| •                                    |     |                           | US   | 6605171 B1                 | 12-08-200        |
|                                      |     |                           | ZA   | 200102212 A                | 20-11-200        |
| US 3938929                           | Α   | 17-02-1976                | US   | 3890181 A                  | 17-06-197        |